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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/494,877	01/31/2000	Zhigang Fang	70239-00086	4072

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CONNOLLY BOVE LODGE & HUTZ LLP  
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WILMINGTON, DE 19899

EXAMINER
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YANG, JIE

ART UNIT	PAPER NUMBER
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1733

MAIL DATE	DELIVERY MODE
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02/08/2012

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<p align="center"><b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b></p>	<b>Application No.</b> 09/494,877	<b>Applicant(s)</b> FANG ET AL.
	<b>Examiner</b> JIE YANG	<b>Art Unit</b> 1733

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 02 February 2012 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.

b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because

(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);

(b) ☐ They raise the issue of new matter (see NOTE below);

(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.

6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: \_\_\_\_\_.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.

12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_

13. ☐ Other: \_\_\_\_\_.

/Jie Yang/  
Primary Examiner, Art Unit 1733

There is no amendment in the instant claims. Claims 1, 7, 11-14, 19-21, 33, 34, 37, 41, and 42 remain for examination.

Continuation of 11. does NOT place the application in condition for allowance:

The Applicant's arguments filed on 2/2/2012 with respect to claims 1, 7, 11-14, 19-21, 33, 34, 37, 41, and 42 have been fully considered but they are not persuasive.

Applicant's arguments are summarized as follows:

- 1) Sue et al (PG'853) discloses a three-phase construction, which contrary to the two-phase construction of the instant invention; Sue et al (PG'853) does not disclose C and Mn in the binding alloy; Sue et al (PG'853) fails to disclose 10 to 30wt% of binder alloy based on the total weight of the cermet material; and Sue et al (PG'853) fails to disclose that the cermet material comprises 10 to 30 wt%Co based on binder alloy;
- 2) JP'301 does not expressly disclose the use of WC; Super Invar alloy of JP'301 does not include 10-30wt%Co; and it would not be motivated for one skilled in the art to "partially" replace the Co binder of Sue et al (PG'853) with Super Invar of JP'301.
- 3) Nakamura et al (US'542) is not a analogous prior art because it discloses a high-strength bonding tool comprising shank and it does not disclose shank material "consist of" only two phases.
- 4) JP'547 is not analogous to the subject matter of Sue et al (PG'853) because the tool of JP'547 is useful bonding an IC chip. It is a hindsight reconstruction to apply JP'547 to combine with PG'853, JP'301 and US'542 .
- 5) None of the combined references disclose or remotely suggest the claim feature of the binder alloy comprising 10 to 30wt%Co as present in each of Applicants' independent claims.

In response,

Regarding the Applicants' argument 1), Firstly, the Examiner notes that Sue et al (PG'853) teaches the metal in WC-M can be choose the same Co or Co alloy as binder, therefore, it can be two phases construction as recited in the instant invention. Furthermore, the metal in WC-M of PG'853 will form alloy with binder alloy during bonding process because high temperature re-melting; Secondly, Sue et al (PG'853) clearly teaches the Co powder can be replaced with alloys of Ni and Fe (paragraph [0009] of PG'853); and Sue et al (PG'853) does not indicate that it can not be partially replacement for Ni and/or Fe to Co. Because the Applicant does not include any specific content limitations for elements C, Mn, and Ni, the impurity level alloy elements in Co alloy of Sue et al (PG'953) meet the C, Mn, Ni limitations as recited in the instant claims.

Still regarding the argument 1) and arguments 2) and 3), JP'301 teaches mixing Super INVAR powder and a ceramic powder in 75:25 to 25:75 mixture and the mixture is sintered; and d) US'542 teaches applying Kovar alloy as binder alloy and US'542 teaches Kovar alloy has a composition of 64wt%Fe; 29wt%Ni; 17wt%Co; and at most 0.5wt%C and Mn. In contrast, the Examiner notes that there is no any specific content limitation for elements C, Mn, and Ni in the instant independent claims.

Still regarding the argument 3), the Examiner disagrees with the Applicant's argument because US'542 teaches applying Kovar alloy as binder alloy and it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace one binder alloy with another one and US'542 clearly teaches advantage of coefficient of linear expansion for the bonded tools (Abstract of US'542).

Regarding the argument 4), The Examiner disagrees with the Applicant's argument because JP'547 is applied for further evidence WC dispersed in Co phase. JP'547 teaches a contact tool for lead material bonding in IC chip used in semiconductor devices that contain a tool base made of WC dispersed in a phase of Co (Abstract of JP'547), which provides further evidence that dispersing WC particles in Co phase is a well-known technique. It is the Examiner's position that Known work in one field of endeavor may prompt variations of it for use in either the same field of a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art.

Regarding the argument 5), US'542 teaches applying Kovar alloy as binder alloy and US'542 teaches Kovar alloy has a composition of 64wt%Fe; 29wt%Ni; 17wt%Co; and at most 0.5wt%C and Mn, which reads on the binder alloy comprising 10 to 30wt%Co as present in each of Applicants' independent claims.

Regarding the request for telephone interview, the Examiner has called and left message for the Applicant on 2/1/2012, the Examiner does not receive further response.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.